IN THE CLAIMS:

Please delete claims 1-17 and add new claims 18-24:

18. A process for the aerobic treatment in a biosolids treatment reactor of a biosolids solution comprising the products of waste water treatment and thermophilic bacteria capable of digesting mesophilic bacteria, said process comprising:

(a) mixing a portion of the biosolids solution with an oxygen-containing gas stream using a jet aeration device;

(b) monitoring at least one physical property indicative of oxygen demand of the biosolids solution;

(c) adjusting the mixing of biosolids solution with the oxygen-containing gas stream by the jet-aeration device such that sufficient oxygen is supplied to satisfy oxygen demand.

19. The process of claim 18, wherein the amount of oxygen supplied is substantially the same as the amount of oxygen demanded in the treatment.

20. The process of claim 18, wherein the monitoring step comprises monitoring the temperature

and the oxygen/reduction potential of the biosolids solution.

21. A process for the aerobic treatment of a biosolids solution comprising mesophilic and thermophilic bacteria, the process comprising:

(a) sensing oxygen/reduction potential of the biosolids solution;

(b) determining oxygen demand of the biosolids solution based upon the starting oxygen/reduction potential;

(c) adjusting a supply of oxygen to the biosolids solution so that sufficient oxygen is supplied to satisfy oxygen demand;

(d) thereafter reducing the supply of oxygen.

22. The process of claim 21, wherein steps (a) through (c) are repeated at least once.

23. An apparatus for aerobic treatment of waste water treatment biosolids comprising:

a reactor having an inlet for the introduction of biosolids;

a jet aeration device within the reactor;

means for automatically sensing and controlling the temperature of the solution within the reactor; and

means for automatically sensing and controlling the oxygen/reduction potential of the solution within the reactor, both of said means being operatively attached to jet aeration device so that based on the temperature and oxygen/reduction potential of the biosolids solution, the means will adjust the oxygen supply to the reactor.

24. An apparatus for aerobic treatment of biosolids comprising:

means for concentrating a biosolids solution;

a reactor fluidly connected to said means for concentrating;

a jet aeration device within the reactor;

means for sensing oxygen/reduction potential of the biosolids solution within the reactor;

means for adjusting the jet aeration device in response to the sensed oxygen/reduction potential of the biosolids solution in the reactor.